

Art Unit: \*\*\*

CLMPTO

01-19-01

MBL

CLAIMS 1,3, 5,6,7,10,11,12, 13,17, 18, 19, 20, AMENDED

1. (Amended) A navigation apparatus providing navigation services comprising:  
a platform block including hardware of the navigation apparatus and basic functions for controlling the hardware;  
a navigation application processing block for providing navigation services using the basic functions included in said platform block; and  
an optional application processing block for providing optional services using any of the navigation services based on information acquired using the basic functions of said platform block, by communicating with said navigation application processing block.

2. The navigation apparatus according to  
0 claim 1, wherein said optional application processing block is an application executed on a virtual platform and is independent of said platform block.

---

3. (Amended) The navigation apparatus according to claim 1, wherein  
said optional application processing block is a Java application executed on a Java virtual machine, and  
said navigation application processing block communicates with said optional application processing block in accordance with a Java native interface.

Art Unit: \*\*\*

4. The navigation apparatus according to  
5 claim 1, wherein said navigation application  
processing block communicates with said optional  
application processing block using socket  
communication.

5. (Amended) A computable readable recording medium storing programs for  
controlling a computer to operate as a navigation apparatus providing navigation services,  
the programs directing a computer to operate as:

a platform block including basic functions for controlling hardware of the  
navigation apparatus;

a navigation application processing block for providing navigation services using  
the basic functions of said platform block; and

an optional application processing block for providing optional services using any  
of the navigation services based on information acquired using the basic functions  
included in said platform block by communicating with said navigation application  
processing block.

6. (Amended) A navigation apparatus for providing navigation services  
comprising:

a platform block including hardware of the navigation apparatus and basic  
functions for controlling the hardware;

a navigation application processing block for providing navigation services using

Art Unit: \*\*\*

the basic functions included in said platform block;

an optional application processing block for providing optional services using any of the navigation services based on information acquired using the basic functions of said platform block; and

an interface processing block for communicating with said optional application processing block and said navigation application processing block to enable any of the optional services to be executed.

7. (Amended) The navigation apparatus according to claim 6, wherein said optional application processing block is executed on a virtual platform and is independent of said platform block.

8. The navigation apparatus according to claim 6, wherein said optional application processing block is a Java application executed on  
5 a Java virtual machine.

9. The navigation apparatus according to claim 6, wherein said interface application block is a Java application executed on a Java virtual  
0 machine.

Art Unit: \*\*\*

10. (Amended) The navigation apparatus according to claim 9, wherein said interface application block includes one of a method for exchanging data with said optional application processing block and a variable member in which said optional application processing block reads and writes data, and a method for exchanging data with said navigation application processing block and a variable member in which said navigation application processing block reads and writes data.

11. (Amended) The navigation apparatus according to claim 6, wherein said navigation application processing block executes any of the navigation services in accordance with navigation control data supplied from said optional application processing block via said interface processing block and supplies navigation information data including one of an interim result and an execution result to said optional application processing block via said interface processing block.

12. (Amended) The navigation apparatus according to claim 11, wherein said interface processing block generates, when the navigation control data from said optional application processing block is composite navigation control data, plural navigation control data sets from the composite navigation control data and supplies the plural navigation control data sets to said navigation application processing block.

13. (Amended) The navigation apparatus according to claim 6, wherein said interface processing block communicates with said optional application processing block using one of socket communication and Java RMI.

---

Art Unit: \*\*\*

14. The navigation apparatus according  
to claim 6, wherein said interface processing block  
communicates with said navigation application  
.5 processing block using socket communication.

15. The navigation apparatus according  
to claim 6, wherein said interface processing block  
acquires a remote optional application processing  
!0 block from an external source using the basic  
functions of said platform block.

16. The navigation apparatus according  
to claim 15, wherein said interface processing  
25 block acquires the remote optional application  
processing block from the external source only when  
a communication service used by the remote optional  
application processing block is available for use.

17. (Amended) The navigation apparatus according to claim 15, wherein said  
interface processing block displays a menu of remote optional application processing

---

Art Unit: \*\*\*

blocks using the basic functions included in said platform block, adds to the menu the remote optional application processing block when the remote optional application processing block is acquired from the external source and starts the acquired remote optional application processing block when selected through the menu.

18. (Amended) The navigation apparatus according to claim 6, wherein said optional application processing block supplies a request for required communication services to said interface processing block, and said interface processing block starts the communication services requested upon receipt of the request.

19. (Amended) The navigation apparatus according to claim 18, wherein said interface processing block acquires a module for executing the communication services requested corresponding to the request when the module is not available.

20. (Amended) The navigation apparatus according to claim 6, wherein said optional application processing block provides collection and delivery information services using any of the navigation services, based on information acquired from a center using the basic functions included in said platform block.